

DIRECT PARTIAL UPDATE OF CRC/ECC CHECK BYTES

ABSTRACT OF THE DISCLOSURE

[0056] Techniques for correcting data bytes on a data storage disk that have been rewritten are provided. A data storage system generates a long block membership (LBM) byte for each sector. The LBM bytes indicates whether the sector is part of a block of sectors. A data storage system can determine whether a failed sector is part of a long block. The data storage system adds the LBM contributions to the CRC and ECC bytes and then attempts to correct the failed sector. If the correction process is successful, the data storage system declares a miscorrection. If the error is not successfully corrected, the data storage system again adds the LBM contributions to the CRC and ECC bytes and then attempts to correct the failed sector. If the correction process is successful, the data correction is accepted if the error pattern and the check byte overlap is greater than a threshold.

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